REMARKS

This is intended as a full and complete response to the Final Office Action dated January 28, 2004, having a shortened statutory period for response set to expire on April 28, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Applicants note that the Examiner erroneously asserts that Applicants filed a response to the Advisory Action mailed May 7, 2003 on May 22, 2003 entitled "Preliminary Amendment" and erroneously asserts Applicants admit that a RCE request was not included with the response filed on May 22, 2003. The Examiner further erroneously asserts that Applicants filed a RCE on June 11, 2003 in response to an Advisory Action mailed May 29, 2003.

Applicants express mailed a RCE request with an IDS and a Preliminary Amendment on May 20, 2003. Applicants sent a courtesy copy of the RCE request, the IDS and Preliminary Amendment enclosed with the RCE request, the express mail label, and itemized postcards to the Examiner on October 29, 2003. As the RCE was express mailed on May 20, 2003, the RCE request was filed on May 20, 2003, and was not filed on June 11, 2003 subsequent to filing the Preliminary Amendment, as asserted by the Examiner.

Claims 1, 5-8, 16, 18, and 21-38 remain pending in the application and are shown above. Claims 1, 5-8, 16, 18, and 21-38 are rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Claims 1, 5-8, 16, 18, and 21-38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Grill* (U.S. Patent No. 6,312,793) in view of *Scholsky, et al.* (U.S. Patent No. 5,010,166). Applicants respectfully traverse the rejection.

The Examiner states that it would have been obvious to use *Scholsky, et al.'s* aldehyde that is a furfuryl, furfuryloxy, or neopentyl compound in place of *Grill's* unspecified aldehydes to form a low dielectric thermoset coating having superior hardness, flexibility, and impact resistance. The Examiner asserts that the polymer coatings of *Scholsky, et al.* have a low dielectric constant (column 5, lines 58-62). Applicants note that column 5, lines 60-61 of *Scholsky, et al.* recites "thereof (*i.e.*, during

the propagation of the polymer chain), particularly in media of low dielectric constant." Applicants submit that *Scholsky, et al.'s* one reference to a low dielectric constant is made with respect to an explanation of a postulated mechanism of ionic polymerization in a particular environment, *i.e.*, a media of low dielectric constant, as column 5, lines 55-61 recite "While not wanting to be tied to theory, yet desirous of providing a full disclosure of our invention, it is presently postulated that the counter-ion of such an ion pair remains in the immediate vicinity of the growing-polymer chain-end throughout the lifetime thereof (*i.e.*, during the propagation of the polymer chain), particularly in media of low dielectric constant." At best, *Scholsky, et al.* may be interpreted as suggesting that the formation of the polymers described therein involves an ionic polymerization step that may occur in a low dielectric constant media or solvent. Applicants maintain that *Scholsky, et al.* does not teach or suggest that the polymer coatings described therein have a low dielectric constant. Furthermore, there is no teaching or suggestion in *Scholsky, et al.* that the polymer coatings of *Scholsky, et al.* contain silicon. Applicants submit that there is no suggestion or motivation in the combination of *Scholsky, et al.* and *Grill* to use compounds provided in *Scholsky, et al.* as components of a polyol polymer in the silicon-containing, low dielectric constant multi-phase film of *Grill.*

Therefore, *Grill* in view of *Scholsky, et al.* does not teach, show, or suggest a method for depositing a low dielectric constant film, comprising introducing a siloxane comprising two or more silicons and from two to five carbons bonded to the silicons into a processing chamber, introducing at least one oxidizable chemical comprising a member selected from the group consisting of furfuryl, furfuryloxy, and neopentyl into the processing chamber, reacting the siloxane and the at least one oxidizable chemical with an oxidizing gas at a temperature that retains the member in a conformal layer, and converting the member to dispersed voids, as recited in claim 1. Applicants respectfully request withdrawal of the rejection of claim 1 and of claims 16, 18, 21, 26-28, and 35-36, which depend thereon.

Regarding claim 5, Applicants agree with the Examiner that *Grill* does not specify an oxidizable chemical that includes a furfuryl, furyfuryloxy, or neopentyl member. While *Scholsky, et al.* describes compounds including furfuryl or neopentyl groups (*e.g.*,

lactones including neopentyl groups, See column 16, lines 10-16, and acrylic monomers including furfuryl groups, See column 16, lines 45-64), *Scholsky, et al.* does not teach or suggest an oxidizable chemical that includes silicon and a furfuryl, furfuryloxy, or neopentyl group, as *Scholsky, et al.* does not describe silicon containing compounds. There is no suggestion in *Scholsky, et al.* or the combination of *Grill* and *Scholsky, et al.* of compounds comprising both silicon and a furfuryl, furfuryloxy, or neopentyl group. Applicants further submit that there is no motivation or suggestion in the combination of *Grill* in view of *Scholsky, et al.* to use the neopentyl or furfuryl groups from the compounds that *Scholsky, et al.* provides to form organic polymer coatings in the compounds that *Grill* provides to form a low dielectric constant film.

Thus, *Grill* in view of *Scholsky, et al.* does not teach, show, or suggest a method for depositing a low dielectric constant film, comprising introducing at least one oxidizable chemical comprising a member selected from the group consisting of furfuryl, furfuryloxy, and neopentyl into the processing chamber, wherein the at least one oxidizable chemical comprises silicon, reacting the at least one oxidizable chemical with an oxidizing gas at a temperature that retains the member in a conformal layer, and converting the member to dispersed voids, as recited in claim 5. Applicants respectfully request withdrawal of the rejection of claim 5 and of claims 6-8, 29-32, and 37-38 which depend thereon.

Regarding claim 22, the Examiner states that *Grill* describes a method of depositing a low dielectric constant film including introducing at least one oxidizable chemical comprising a cyclic ring consisting of carbon, oxygen, and hydrogen into a chamber. The Examiner further asserts that it is clear from *Grill's* description of a precursor selected from molecules containing at least some of Si, C, O, and H atoms, *e.g.*, TMCTS, tetraethylcyclotetrasiloxane, and decamethylcyclopentasiloxane, and oxidizing molecules such as O_2 or N_2O (*Grill*, column 3, lines 13-20) that any combination of Si, C, O, and H may be used including only silicon, carbon, and oxygen in *Grill's* oxidizable chemical. Applicants respectfully traverse the rejection.

Currently pending claim 22 recites at least one oxidizable chemical comprising a cyclic ring consisting of carbon and oxygen. While *Grill* lists compounds that include ring structures including carbon (column 3, lines 40-51) or silicon and oxygen (column 3,

lines 17-20), *Grill* does not name compounds that include a cyclic ring consisting of carbon and oxygen. Applicants further submit that *Grill's* broad description of a precursor containing at least some of Si, C, O, and H atoms does not teach or suggest an oxidizable chemical comprising a cyclic ring consisting of carbon and oxygen.

Furthermore, *Grill* in view of *Scholsky, et al.* does not suggest or motivate reacting a siloxane with an oxidizable chemical comprising a cyclic ring consisting of carbon and oxygen. While *Scholsky, et al.* describes chemicals comprising a cyclic ring consisting of carbon and oxygen, there is no suggestion or motivation in the combination of *Grill* and *Scholsky, et al.* to react a siloxane with an oxidizable chemical comprising a cyclic ring consisting of carbon and oxygen. As discussed above, there is no motivation to use the precursors of *Scholsky, et al.* in the process of *Grill.*

Therefore, *Grill* in view of *Scholsky, et al.* does not teach, show, or suggest a method for depositing a low dielectric constant film, comprising introducing a siloxane comprising two or more silicons and four or more methyl groups bonded to the silicons into a processing chamber, introducing at least one oxidizable chemical comprising a cyclic ring consisting of carbon and oxygen into the processing chamber, reacting the siloxane and the at least one oxidizable chemical with an oxidizing gas at a temperature that retains the cyclic ring in a conformal layer, and converting the cyclic ring to dispersed voids, as recited in claim 22. Applicants respectfully request withdrawal of the rejection of claim 22 and of claims 23-25 and 33-34 which depend thereon.

Regarding claims 35 and 37, the Examiner states that *Grill* describes the method of claims 1 and 5, wherein the oxidizing gas is carbon dioxide (column 6, lines 1-5). Applicants respectfully traverse the rejection.

Grill describes using an oxidizing agent such as O_2 or N_2O. Column 6, lines 1-5 of *Grill* describe a first precursor gas containing Si, O, C, and H and optionally molecules which have a ring structure and a second precursor gas or gas mixture containing one or more types of molecules comprising carbon and hydrogen atoms. *Grill* does not teach or suggest using carbon dioxide as a carrier gas. Applicants further submit that *Scholsky, et al.*, alone or in combination with *Grill* does not teach or suggest using carbon dioxide as a carrier gas.

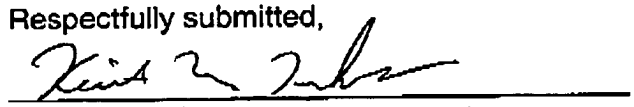
Thus, *Grill* in view of *Scholsky, et al.* does not teach, show, or suggest a method for depositing a low dielectric constant film, comprising introducing a siloxane comprising two or more silicons and from two to five carbons bonded to the silicons into a processing chamber, introducing at least one oxidizable chemical comprising a member selected from the group consisting of furfuryl, furfuryloxy, and neopentyl into the processing chamber, reacting the siloxane and the at least one oxidizable chemical with an oxidizing gas at a temperature that retains the member in a conformal layer, and converting the member to dispersed voids, wherein the oxidizing gas is carbon dioxide, as recited in claim 35. Applicants respectfully request withdrawal of the rejection of claim 35.

Grill in view of *Scholsky, et al.* does not teach, show, or suggest a method for depositing a low dielectric constant film, comprising introducing at least one oxidizable chemical comprising a member selected from the group consisting of furfuryl, furfuryloxy, and neopentyl into the processing chamber, wherein the at least one oxidizable chemical comprises silicon, reacting the at least one oxidizable chemical with an oxidizing gas at a temperature that retains the member in a conformal layer, and converting the member to dispersed voids, wherein the oxidizing gas is carbon dioxide, as recited in claim 37.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the Final Office Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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